

Solutions?

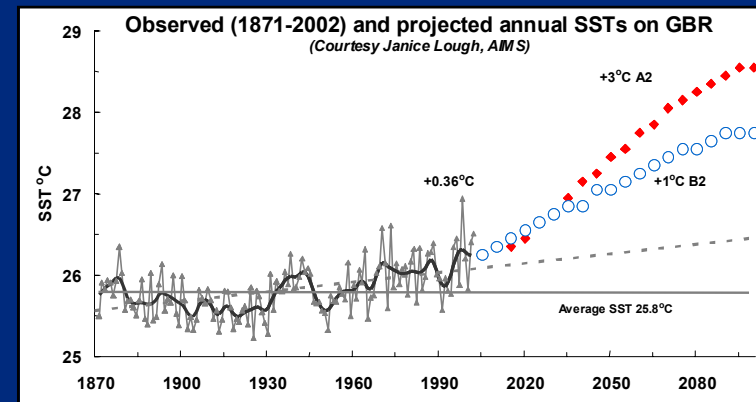
Key challenges

- ◆ **Unprecedented spatial scale**
 - ◆ affects entire ecosystems
- ◆ **Stochastic (not self-limiting)**
 - ◆ disturbance return intervals do not match recovery
- ◆ **Episodic & threshold effects**
- ◆ **Impacts are persistent & cumulative**
 - potentially catastrophic but certainly chronic
- ◆ **Additive/synergistic effects with existing pressures**
- ◆ **Skepticism \Rightarrow Acceptance \Rightarrow Action**

Solutions?

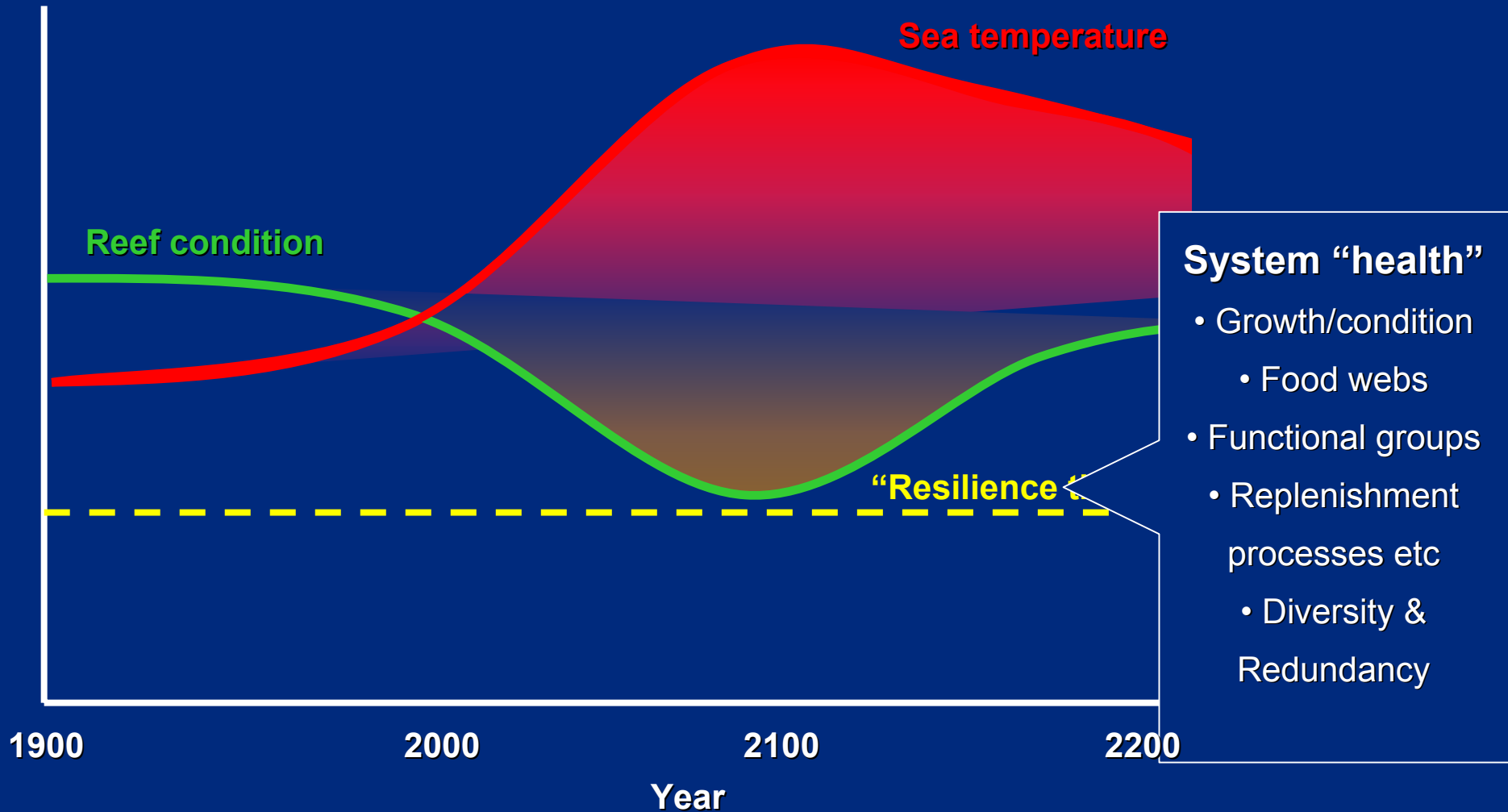
The need for action

- ◆ Further warming unavoidable
- ◆ Future bleaching events almost certain
- ◆ Reef condition will continue to decline
- ◆ Severity and reversibility of damage will be determined by:
 - Rate and extent of warming
 - Resilience of reef ecosystem



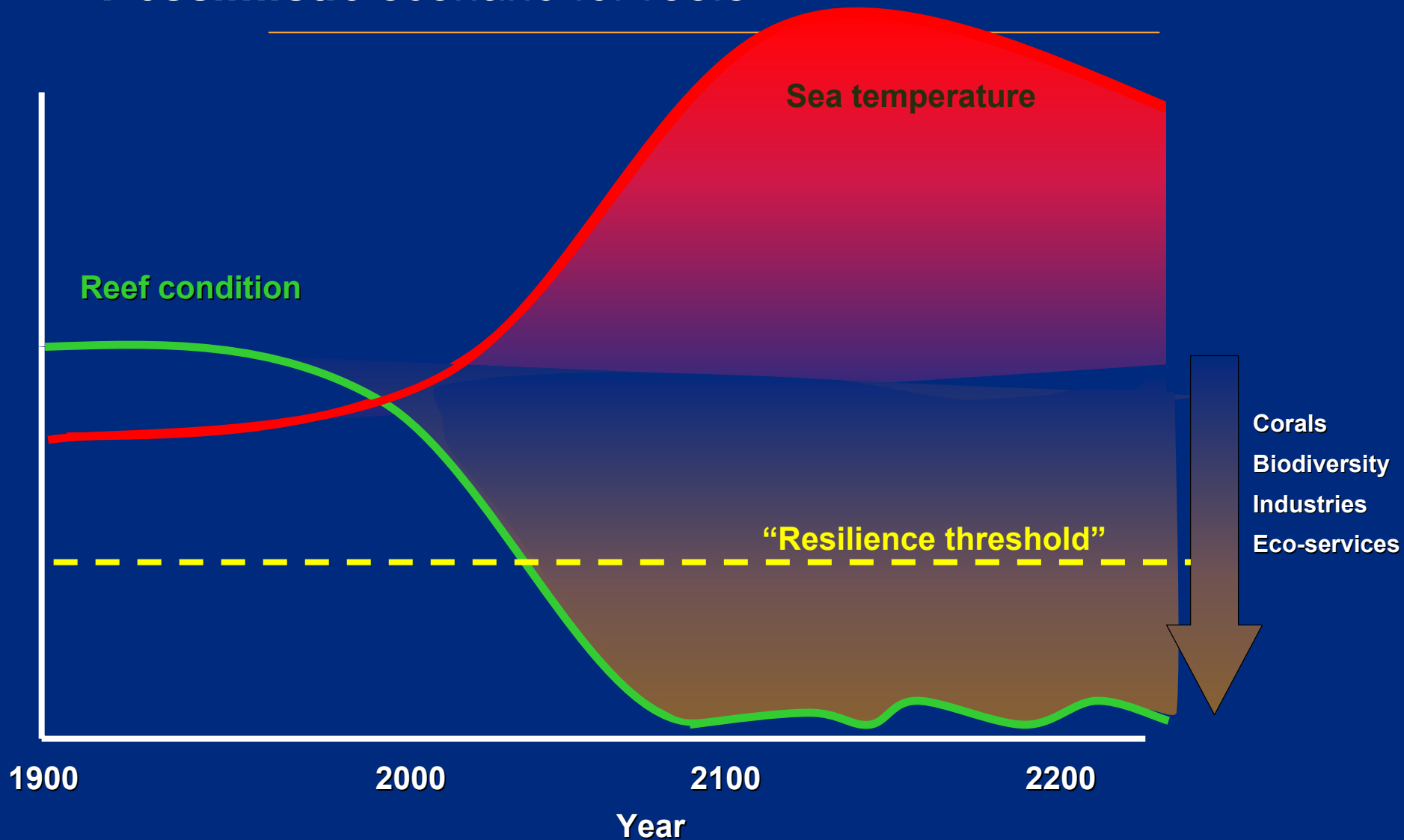
Solutions

Optimistic scenario for reefs



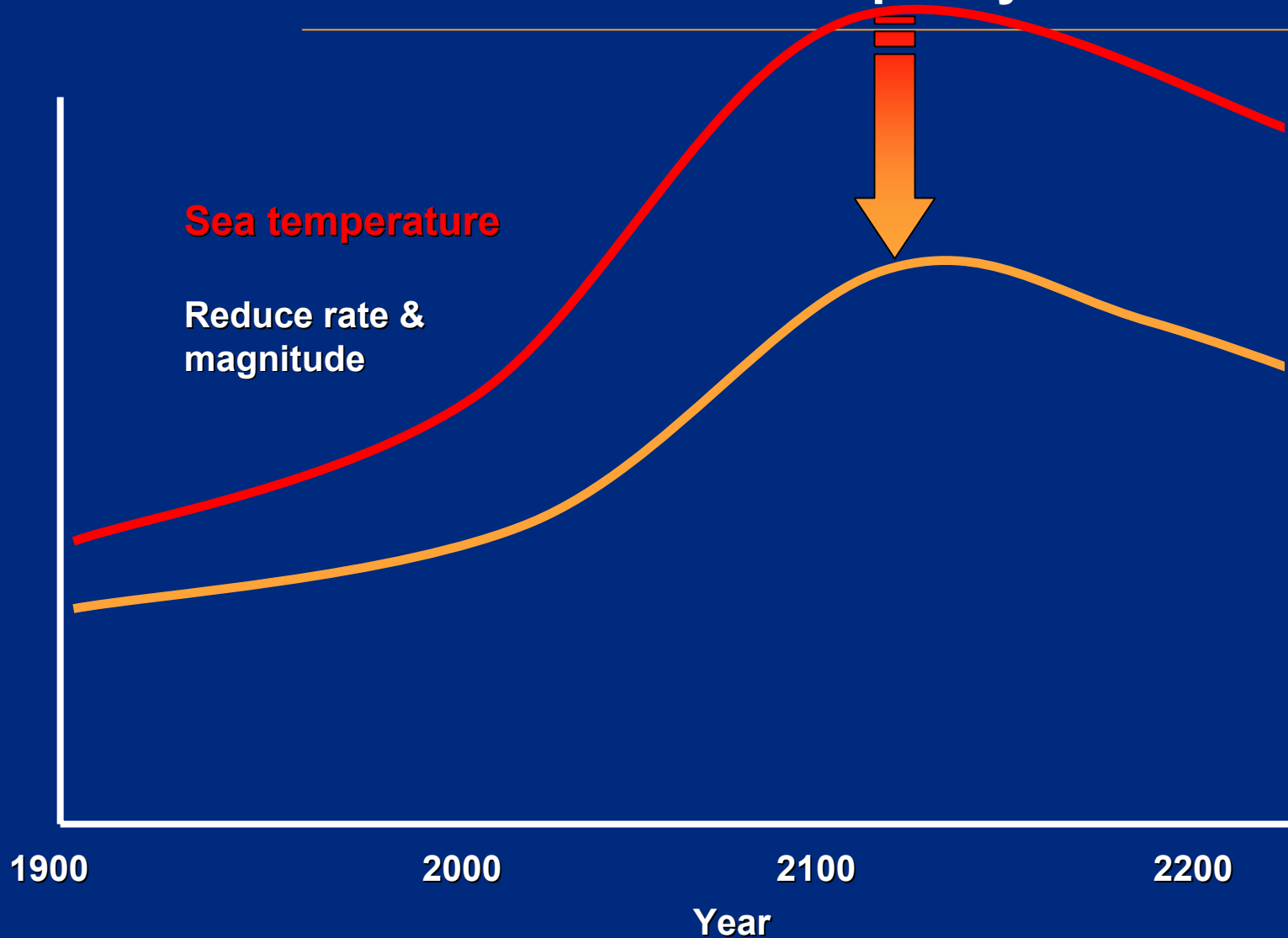
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Pessimistic scenario for reefs



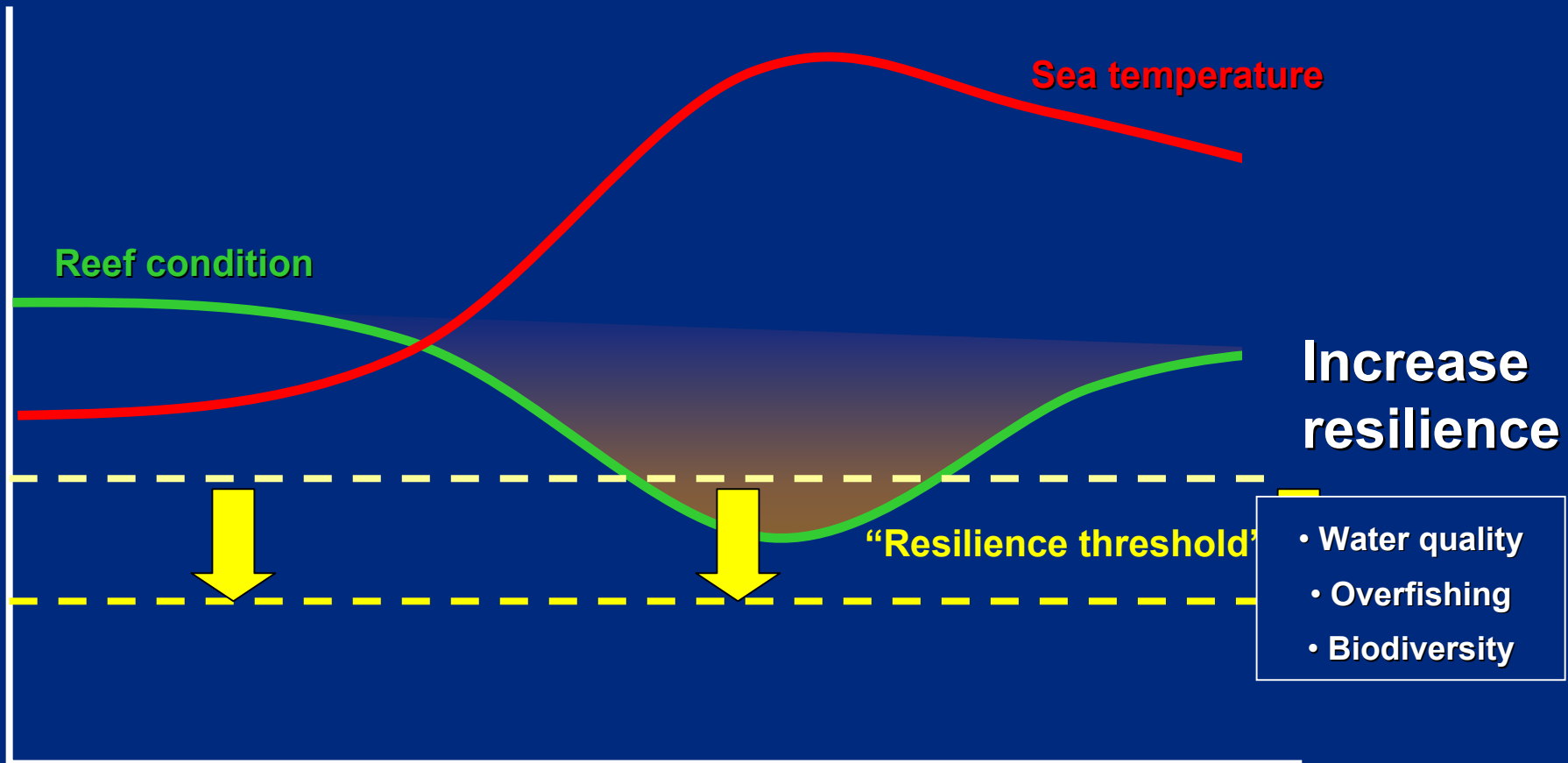
Solutions

Inform national/international policy



Solutions

Reduce local stresses



Solutions

Goals & objectives

- ◆ **Goal:** Increase chance of reefs surviving future warming
- ◆ **Objectives**
 - ◆ Reduce rate & extent of global warming
 - Prevent irreversible damage
 - Increase chances of adaptation
 - ◆ Support resilience of reef ecosystem
 - Maintain healthy functioning
 - Reduce other pressures

Solutions

A framework for action

1. Assess risk and predict bleaching
2. Short term response
3. Long term response
4. Communication
5. Restoration?
6. Local Action Strategies
7. Fill gaps & build capacity

 “Guide for Managers”